REMARKS

Prior to entry of this paper, Claims 1-47 were pending. Claims 1-47 were rejected. In this paper, Claims 1, 19, 36, 44, and 47 are amended; No Claims are canceled; and no Claims are added. Claims 1-47 are currently pending. No new matter is added by way of this amendment. For at least the following reasons, Applicant respectfully submits that each of the presently pending claims is in condition for allowance.

Claim Rejections – 35 U.S.C. § 101

Claims 1-47 were rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. In response, and without limiting the scope of the invention, Applicant has amended the independent Claims 1, 19, 36, 44, and 47 to clarify that these claims describe a tangible result. For example, amended claim 1 recites, in part, receiving from a user the data string as plaintext, and storing the resulting encoded data string as an encoded representation of the received plaintext data string. Because claim 1 recites receiving data from a user, operating on the data to produce encoded data that is then stored, at least amended claim 1 specifies an invention that produces a useful, concrete, and tangible result. Similarly, amended claims 19, 36, and 47 recite similar useful, concrete, and tangible results. In addition, claim 44 recites, in part, a transceiver that receives the data string and sends an encoded array to another apparatus. Thus, Applicant submits that each of the independent claims specify useful and tangible results; therefore, Applicant respectfully request that the rejection of independent Claims 1, 19, 36, 44, and 47 under 35 U.S.C. §101 be withdrawn.

The Office Action further indicates that all of the dependent claims are rejected as also not being statutory for at least the same reasons cited above for their respective independent claims. It is well established that dependent claims are patentable for at least the same reasons as the corresponding independent claims from which the dependent claims depend. Accordingly, Applicant respectfully requests that the rejection of each of the dependent Claims also be withdrawn.

Claim Rejections – 35 U.S.C. § 103

Claims 1-47 were rejected under 35 U.S.C. 103 (a) as being unpatentable over McDonough (US 6,549,563), and further in view of Rhoads (US 6,064,737). Applicant respectfully traverses these rejections.

The Applicant respectfully submits that the cited references do not teach or suggest all of the claim limitations. For example, Claim 1 recites, among other things, selecting a direction within the n-dimensional entity based in part on a generated bit sequence. Applicant submits that McDonough does not suggest selecting a direction based on a generated bit sequence.

Instead, McDonough suggests reading data from data sequences but, unlike the present invention, McDonough does not suggest determining a direction in which to read data based on a generated bit sequence. Specifically, McDonough discloses a "[d]ata access module" that "provides data of a first data sequence in response to an address from counter." See McDonough, Col. 9 lines 4-6. McDonough further discloses selecting "[d]ata of a stored data sequence" and providing the data "for use in communication." See McDonough, Col. 11 lines 8-10. In both these instances McDonough suggests data is being read from a data sequence. However, McDonough discloses that such data sequences is a PN sequence (Col. 11, line 25), and further that the PN sequence is of length 2^N. See McDonough, Col. 8, lines 17-19. Moreover, McDonough suggests storing data "in a consecutive manner." See McDonough, Col. 7 lines 46-47. This data is accessed using a counter that generates addresses, "where each new address corresponds to the next desired data in the data sequence." See McDonough, Col. 7, lines 42-46. The counter "increments the value at its output to generate consecutive addresses from which to read data. See McDonough, Col. 7 lines 47-51. Therefore, McDonough suggests performing a read in a same direction within the sequence, but that direction is not selected based on the generated bit sequence. Thus, it is clear that McDonough does not teach or suggest selecting a direction within the n-dimensional entity based in part on a bit sequence, as is claimed by the Applicant. Therefore, for at least this reason, McDonough, either alone or in combination with Rhoads (the combination of which the Applicant denies), does not render at least Claim 1 obvious.

In addition, Applicant submits McDonough does not teach or suggest determining an offset between a cursor position and a match bit within the n-dimensional entity, wherein the match bit is based in part on the action, the direction, and the each bit in the data string. Unlike the present invention, McDonough merely describes an offset that is an input to indicate a location from which to read data. In particular, McDonough discloses generating "[o]ffset counter data" based on "the counter data received and offset data." See McDonough, Col. 11 lines 6-9. The counter data is a memory address used to read data from a data sequence. See McDonough, Col. 7 lines 42-46. Moreover, the first and second offset data, in McDonough is associated with first and second base station offsets, respectively. See McDonough, Col. 11, lines 26-29. Thus, nowhere does McDonough appear to disclose or even suggest that the offset is determined as an offset between a cursor position and a match bit, as claimed. In fact, nowhere does McDonough even discuss using a cursor position in determining an offset. McDonough also does not discuss determining the match bit based in part on the action, the direction, and the each bit in the data string, as claimed by at least Claim 1. Thus, for at least these reasons, McDonough does not teach or suggest all of the limitations of at least Claim 1.

Applicant further submits that McDonough also does not teach or suggest performing an action based in part on the read number of bits, where the bits are read from the n-dimensional entity, as further recited by Claim 1. While McDonough describes an action, such action is not determined based on read bits from the n-dimensional entity. Instead, McDonough discloses "data sequences" that "may be quite different from one another in terms of . . . length and/or purpose." See McDonough, Col. 9 lines 34-35. However, a mere mention that a data sequence may have a different purpose does not in any way teach or suggest performing an action based on the read number of bits. It merely notes that a data sequence may have a different purpose for use, and not that the action performed is based on the read number of bits. Thus, McDonough does not teach or suggest performing an action based in part on the read number of bits as recited in at least Claim 1.

Similarly, McDonough does not teach or suggest modifying the generated bit sequence with the determined offset by inserting the determined offset into the generated bit sequence, as recited in at least Claim 1. Instead, McDonough discloses offset counter data that is generated based on the

counter data received and offset data. See McDonough, Col. 11, lines 6-9. Nowhere, however does McDonough appear to disclose or suggest that the offset is inserted into the generated bit sequence as recited in the Applicant's claims.

After a careful review of Rhoads, the Applicant respectfully submits that Rhoads also does not teach or suggest modifying the generated bit sequence with the determined offset by inserting the determined offset into the generated bit sequence, as recited in at least Claim 1. Instead, Rhoads merely discloses that in a hybrid system, the telephone and cellular carrier each have a reference noise key from which the telephone selects a field of bits, such as 50 bits beginning at a randomly selected offset. See Rhoads, Col. 2, lines 60-65. Use of the randomly selected offset as described by Rhoads appears to have nothing to do with a) determining an offset between a cursor position and a match bit, and b) modifying the generated bit sequence by inserting the determined offset into the generated bit sequence, as claimed by at least Claim 1. Thus, Applicant respectfully submits that such randomly selected offset as described by Rhoads can not render obvious the Applicant's claimed invention. Therefore, the Applicant requests that for at least the reasons discussed above, at least Claim 1 should be allowed to issue.

Furthermore, Independent Claims 19, 36, 44, and 47 recite similar, albeit different, limitations to Claim 1. For example, amended claims 19, 36, and44 each recite, in part, modifying the bit sequence with the determined offset by inserting the determined offset into the generated bit sequence to generate an encoded data string for each bit in the data string. Similarly, amended Claim 47 recites, in part, modifying the each random bit sequence by inserting into each random bit sequence an offset associated with each bit in the data string. In addition, claim 19 recites determining a direction with the n-dimensional entity...and selecting another direction based in part on the bit sequence, which is clearly not disclosed or suggested in McDonough, or Rhoads. Thus, for at least the reasons noted above for Claim 1, independent Claims 19, 36, 44, and 47 should also be allowed to issue.

The Applicant also respectfully submits that the cited references do not teach or suggest all of the limitations of dependent Claim 2. For example, Claim 2 recites, among other things,

determining a number of dimensions of the n-dimensional entity, and further determining a length for each dimension of the n-dimensional entity. Unlike the present invention, McDonough suggests data sequences that are one-dimensional. See McDonough, at Col. 8, lines 17-19, where the counter comprises an (at least) N-bit counter for generating a PN sequence of length 2^N. Nowhere in McDonough is there a suggestion that the PN sequence includes more than a single dimension – more than merely a length. There is simply no teaching or suggestion in McDonough of determining a number of dimensions of the n-dimensional entity, as recited in Claim 2. Thus, Claim 2 is not obvious over McDonough, and is therefore in condition for allowance.

Similarly, Claim 9 is neither disclosed nor suggested by the cited prior art references. Claim 9 recites, in part, interpreting the read number of bits as an op-code, determining an action associated with the op-code, and executing the action associated with the op-code. Claim 9 may be understood by referring to Applicant's Figure 4, and related description at page 15, lines 7-30, as one non-limiting example. As disclosed, the op-codes, in one embodiment, may represent an action to be performed, such as "reading the next eight bits along the X direction within the n-dimensional entity," or the like. While this is merely an example, such op-codes result in performing some specified action. Thus, Claim 9 indicates that the read number of bits is used to determine an op-code which in turn indicates an action to be executed. Nowhere, however, does McDonough even suggest such limitations. Instead, McDonough merely mentions that "in addition to shifting, it is often desirable to be able to determine the extent to which a particular (shifted) PN sequence is offset relative to a nominal (unshifted) PN sequence. That is, it is desirable to be able to read the current state or offset at which a particular PN sequence resides." See McDonough Col. 4, lines 42-45. This discussion by McDonough about reading the current state or offset at which a sequence resides does not in any manner suggest that at op-code is associated with the offset, the location that the PN sequence resides, or a result of such determination. Nor, is there even a suggestion that the determination results in executing an action associated with the op-code. McDonough simply does not teach or suggest such limitations as recited in Claim 9. Thus, for at least these reasons, McDonough cannot and does not render obvious at least Claim 9. Similarly, because Claim 22

refers also to interpreting the determined number of bits as an op-code, McDonough also does not render Claim 22 obvious.

Moreover, because claims 2-18, 20-35, 37-43, and 45-46 depend from independent claims 1, 19, 36, and 44 respectively, they are also allowable for at least the same reasons as the independent claims. Thus, Applicants submit that the above rejections should be withdrawn, and claims 1-47 should be allowed to issue.

CONCLUSION

It is respectfully submitted that each of the presently pending claims is in condition for allowance and notification to that effect is requested. Examiner is invited to contact the Applicant's representative at the below-listed telephone number if it is believed that the prosecution of this application may be assisted thereby. Although only certain arguments regarding patentability are set forth herein, there may be other arguments and reasons why the claimed invention is patentable. Applicant reserves the right to raise these arguments in the future.

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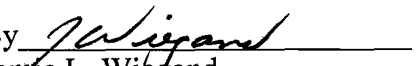
Respectfully submitted,

By 

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